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Packaged Fluid Milk Sales in Federal Milk Order Markets:

By Size and Type of Container And Distribution Method During November 2003

PREFACE

This publication presents information relating to the containers in which fluid milk products are sold, and the methods of distribution used to market these items by handlers regulated under Federal milk marketing orders. The information in this report is based on a survey of fluid milk sales under Federal milk marketing orders during November 2003. Its purpose was to update a similar survey in November 2001, and to see if trends observed in past surveys are continuing. Data were obtained from milk handlers regulated under the 11 marketing orders.

Handlers regulated under Federal milk orders process approximately three-quarters of all the fluid milk products sold in the United States. In general, the sizes and types of containers, and methods of distribution used to market this production would be representative of the entire country. In addition, although these surveys are based on November fluid milk sales, the relationships shown would be representative in other months of the year. Two exceptions would be sales in half-pint containers and sales through school outlets which would not be applicable to sales in a nonschool month.

The tables in this report provide historical information from past surveys and detailed information from the current survey. Information is presented for individual orders and for all orders combined. The data in this report are percentages of total fluid milk products sold by regulated handlers. The number of each size of container can be approximated by using the additional information as shown in the appendices at the end of the report.

This is the twenty-third report in a series. Similar data have been distributed based on surveys made in November 1963 through 1967, 1969, and every other year through 2001.

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SURVEY HIGHLIGHTS

Some highlights of this survey with comparisons to previous years are:

- (1) The proportion of total fluid milk products sold in plastic containers increased, continuing the long-term trend in evidence since this survey was first taken in 1963. The 1.5 percentage point increase pushed the market share of plastic to 83.9 percent. Sales of fluid milk in paper containers accounted for 15.9 percent of total sales, while glass containers accounted for 0.2 percent of total sales. (See table 1.)
- (2) The proportion of total fluid milk products sold in plastic increased or held steady for nearly all container sizes smaller than a gallon. The most notable increase from 2001 occurred in half-gallon sizes to 13.6 percent. The market share of quarts increased by a little less than one-third to 1.4 percent. (See table 3.)
- (3) Plastic containers accounted for more than 83 percent or more of the sales of whole milk, reduced fat (2%) milk, low fat (1%) milk, and fat-free (skim) milk. Conversely, about 68 percent of the sales of flavored fat-reduced milk were sold in paper containers. The market share for flavored whole milk sold in plastic increased by 5 percentage points to 77.4 percent. (See table 3.)
- (4) In each of the Federal milk orders, significantly more fluid milk products were sold in plastic containers than in paper and glass combined. Market shares of plastic ranged from 75.8 percent in the Northeast order to 90.8 percent in the Florida order. Glass containers were used in 4 of the 11 orders; the largest market share for glass was 1.1 percent in the Upper Midwest order. (See table 4.)
- (5) Single-serve, round plastic containers accounted for 1.5 percent of total fluid milk product sales. On a regional basis, single-serve round containers ranged from 2.5 percent of total fluid milk product sales in the Southwest to 0.4 percent in the Florida order. Nearly 31 percent of flavored whole milk sales were made in these round containers as compared to 0.1 percent of low fat milk sales. Pints accounted for 74 percent of the sales of this type of container, half-pints about 15 percent, and other sizes about 11 percent. Of the total sales of fluid milk products in plastic pints and half-pints, 59 and 39 percent, respectively, were in these single-serve round plastic containers. (See tables 3 and 5.)

It should be pointed out that there may be some data collection issues concerning this type of container. The separate reporting of this container type in this survey is relatively new. As such, the information for some orders may not be comparable to that reported in earlier surveys. Another important fact to mention is that the fluid milk products included in this survey are those that fall into the Class I use category under Federal milk orders. Thus, the use of this type of container in the distribution of milk products that are consumed as a beverage but are not Class I products is not included in this report.

- (6) The market share of total fluid milk products sold in gallons decreased slightly to 65.0 percent. This market share has appeared to plateau at about this level over the last several surveys. Conversely, the market share of half-gallon containers increased to 18.3 percent. About 9.0 percent of total sales were made in half-pint containers, down about 0.5 percentage points from the previous survey. Fluid milk products sold in the remaining container sizes showed little or no change. (See tables 2 and 3.)
- (7) For nearly all container sizes, plastic accounted for larger proportions of total sales. While plastics' share of gallons remained at 99.9 percent, plastics' share of half-gallons increased over 4 percentage points to 74.2 percent. For pint containers, the share sold in plastic was 8.5 percentage points higher at 89.8 percent. For "other" sizes, the share increased markedly to 63.4 percent. The single-serve, round (milk bottle shaped) container likely contributed largely to the increases in the pint and "other" size shares. The plastic share of quarts increased 7 points to 37.3 percentage points. (See table 3.)
- (8) Gallon containers accounted for much larger proportions of the sales of whole milk, reduced-fat milk (2%), low fat (1%) milk, and fat-free (skim) milk. On the other hand, close to 60 percent of the sales of flavored whole milk and nearly 71 percent of the sales of flavored fat-reduced milk were made in pint and half-pint containers. These market shares might be expected as the sales of these flavored milk products are made predominantly through schools and other food service outlets. Much more buttermilk was sold in half-gallon containers than in other sizes. Eggnog had over 90 percent of its sales in half-gallon and quart containers. (See table 3.)
- (9) In each of the Federal milk orders, a larger proportion of total fluid milk products were sold in gallon containers than in all other sizes combined. The market share of gallons ranged from 53.4 percent in the Northeast order to 73.8 percent in the Arizona-Las Vegas order. The proportion of fluid milk products sold in half-pint containers was notably larger in the Southeast and Southwest. In the Western order, quarts accounted for over twice the all market average. (See table 4.)
- (10) The proportion of fluid milk products sold through wholesale outlets remained unchanged at 99.6 percent. The remaining 0.4 percent was home-delivered. (See table 6.)
- (11) The most important wholesale outlet continues to be food chain stores, which accounted for more than 60 percent of total fluid milk sales. However, the market share of this wholesale distribution method did drop 3.3 percentage points in the current survey. Fluid milk sales through institutional outlets (military and schools) totaled 7.3 percent of total sales, down from 2001. Sales through all other wholesale outlets accounted for 32.3 percent of total sales, up 4.0 percentage points from 2001, largely as a result of sales in superstores/ hypermarkets and warehouse stores/ wholesale clubs. (See table 6.)

- (12) The food chain store method of distribution is further broken down into supermarkets and dairy/convenience stores. Sales of fluid milk products through supermarkets accounted for 49.6 percent of total sales, down about 3.9 percentage points from 2001. On a regional basis, the supermarkets market share ranged from 42.9 percent in the Upper Midwest order to 61.2 percent in the Florida order. Sales of fluid milk products through dairy/convenience stores accounted for 10.5 percent of total sales, up 0.5 percentage points. A much larger proportion of fluid milk sales occurred at this method of distribution in the Northeast order. (See table 7.)
- (13) The market share of vertically integrated food chain stores totaled 25.5 percent, up from 22.3 percent in 2001, and the highest market share since this distribution method was first measured over 30 years ago. Sales by vertically integrated supermarket chains also showed the highest market share ever of 22.0 percent of total sales, while vertically integrated dairy/convenience store chains accounted for 3.6 percent of total sales. Vertical integration of food chains showed significant regional variation. In the Florida order, over 56 percent of total fluid milk sales were made by vertically integrated food chains. There was virtually no vertical integration in the Upper Midwest order. Vertically integrated supermarket chains accounted for 86 percent of food chain store vertical integration and also showed significant regional variation. The market share of vertically integrated dairy/convenience chains in the Northeast was 9.9 percent, nearly three the national average of 3.6 percent. (See table 8.)
- (14) Schools were the predominant institutional outlet. Sales of total fluid milk products through elementary, high school, and college outlets totaled 6.4 percent, 0.6 percentage points below 2001, and about at the same level surveyed six to eight years earlier. On a regional basis, the market share of schools ranged from 9.4 percent in the Southwest order to 2.9 percent in the Pacific Northwest order. Sales of fluid milk products through military installations totaled 0.9 percent. (See table 7.)
- (15) This is the third survey in which information was collected for some of the outlets that have been included in all other wholesale outlets, namely superstores/hypermarkets and warehouse stores/wholesale clubs. Sales of fluid milk products through superstores/hypermarkets accounted for 7.5 percent of total sales, up 1.0 percentage points from 2001. The Appalachian and Southeast orders had the highest market shares at 14.8 percent and 13.1 percent, respectively. The market share of warehouse stores/wholesale clubs was 4.0 percent, up 1.4 percentage points from 2001. The market shares ranged from 12.3 percent in the Central order to 1.2 percent in the Appalachian order. (See table 9.)

Sales through these methods may account for the decrease in the food chain stores market share that occurred over the last few surveys.

Table 1—Percentage of Total Fluid Milk Products Sold by Type of Container, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963-2003 ^{1/}

Year	Type of container				
	Glass	Paper	Plastic	Other ^{2/}	Total
	Percent				
1963	32	63	^{3/}	5	100
1964	31	64	2	2	100
1965	29	65	4	2	100
1966	25	67	6	2	100
1969	12	76	11	1	100
1973	4	71	25	^{4/}	100
1977	1	58	41	^{4/}	100
1981	1	42	57	^{4/}	100
1985	^{4/}	34	65	^{4/}	100
1989	^{4/}	31	69	^{4/}	100
1993	^{4/}	25	74	^{4/}	100
1997	^{4/}	21	79	^{4/}	100
1999	^{4/}	19	81	0	100
2001	^{4/}	17	82	0	100
2003	^{4/}	16	84	0	100

^{1/} The figures in the table are based on the total sales volume in all orders combined. See Appendix Table 1 for the applicable sales volume and fluid milk products included.

^{2/} Percentages represent metal cans and plastic bag-in-box containers in 1963; metal cans only, 1964 to date.

^{3/} Data were reported as "Other."

^{4/} Less than 0.5 percent.

Table 2--Percentage of Total Fluid Milk Products Sold by Size of Container, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963-2003 ^{1/}

Year	Size of container							
	Gallon	Half-gallon	Quart	Pint	Half-pint	Over 10 quarts	Other	Total
	Percent							
1963	13	56	15	1	9	5 ^{2/}	1	100
1964	16	54	13	1	10	4	1	100
1965	17	54	12	1	10	4	2	100
1966	18	53	11	1	10	5	2	100
1969	23	48	12	1	10	4	2	100
1973	37	38	8	1	10	4	2	100
1977	49	29	6	1	11	3	1	100
1981	57	24	5	1	10	3	^{3/}	100
1985	60	22	5	2	9	2	^{3/}	100
1989	61	21	4	2	10	2	^{3/}	100
1993	64	19	4	2	9	2	^{3/}	100
1997	66	18	4	2	9	1	^{3/}	100
1999	65	18	4	2	10	1	^{3/}	100
2001	65	18	4	2	9	1	1	100
2003	65	18	4	2	9	1	1	100

^{1/} The figures in the table are based on the total sales volume in all orders combined. See Appendix Table 1 for the applicable sales volume and fluid milk products included.

^{2/} Includes "5-10 quart" containers.

^{3/} Less than 0.5 percent.

Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2003 ^{1/}

Size of container ^{2/}	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Whole milk</u>			
Gallon		<u>3/</u>	73.2	73.2
Half-gallon	0.1	3.3	13.5	16.8
Quart	<u>3/</u>	1.7	1.2	2.9
Pint		0.2	0.5	0.7
Half-pint	<u>3/</u>	3.7	0.3	4.0
6-Gallon			0.2	0.2
5-Gallon			0.7	0.7
Other	<u>4/</u>	0.3	0.3	0.7
Round Pint			0.7	0.7
Round Half-pint			0.1	0.1
Round Other			0.1	0.1
Total of all sizes	0.1	9.2	90.7	100.0
	<u>Flavored whole milk</u>			
Gallon			1.8	1.8
Half-gallon	<u>3/</u>	8.3	13.2	21.4
Quart	<u>3/</u>	5.1	10.6	15.7
Pint		3.2	19.7	22.9
Half-pint	<u>3/</u>	5.1	0.2	5.3
6-Gallon			0.1	0.1
5-Gallon			0.5	0.5
Other	0.6	0.3	0.7	1.6
Round Pint			27.1	27.1
Round Half-pint			2.0	2.0
Round Other			1.7	1.7
Total of all sizes	0.6	22.0	77.4	100.0

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Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2003 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Eggnog</u>			
Gallon			1.5	1.5
Half-gallon		21.4	26.6	48.0
Quart	<u>3</u> /	32.0	13.1	45.1
Pint		0.2	1.4	1.7
Half-pint				
6-Gallon				
5-Gallon				
Other	0.5	1.0	0.5	2.0
Round Pint			1.7	1.7
Round Half-pint			<u>3</u> /	<u>3</u> /
Round Other			<u>3</u> /	<u>3</u> /
Total of all sizes	0.5	54.7	44.8	100.0
	<u>Reduced fat (2%) milk</u>			
Gallon			74.3	74.3
Half-gallon	0.1	3.1	12.4	15.7
Quart	<u>3</u> /	1.2	0.7	1.8
Pint		0.1	0.1	0.2
Half-pint	<u>3</u> /	5.4	0.3	5.7
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			1.3	1.3
Other	<u>4</u> /	0.2	0.1	0.3
Round Pint			0.4	0.4
Round Half-pint			<u>4</u> /	<u>4</u> /
Round Other			0.1	0.1
Total of all sizes	0.2	10.1	89.7	100.0

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Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2003 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Low fat (1%) milk</u>			
Gallon			67.7	67.7
Half-gallon	0.1	5.2	14.1	19.4
Quart	<u>3</u> /	1.6	0.5	2.1
Pint		<u>4</u> /	0.1	0.1
Half-pint	<u>3</u> /	9.1	0.3	9.4
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			0.5	0.5
Other	<u>4</u> /	0.3	0.3	0.6
Round Pint			<u>4</u> /	<u>4</u> /
Round Half-pint			0.1	0.1
Round Other			<u>4</u> /	<u>4</u> /
Total of all sizes	0.1	16.2	83.7	100.0
	<u>Fat-free (skim) milk</u>			
Gallon			68.1	68.1
Half-gallon	0.4	7.3	15.8	23.5
Quart	<u>3</u> /	2.2	0.9	3.2
Pint		<u>4</u> /	0.1	0.1
Half-pint	<u>3</u> /	3.4	0.2	3.6
6-Gallon			0.1	0.1
5-Gallon			0.8	0.8
Other	<u>4</u> /	0.3	0.2	0.5
Round Pint			0.1	0.1
Round Half-pint			<u>4</u> /	<u>4</u> /
Round Other				
Total of all sizes	0.4	13.3	86.3	100.0

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Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2003 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Flavored fat-reduced milk</u>			
Gallon			11.4	11.4
Half-gallon	<u>3</u> /	2.5	6.6	9.2
Quart	<u>3</u> /	1.2	1.1	2.3
Pint		0.6	2.0	2.6
Half-pint	<u>3</u> /	61.8	2.0	63.8
6-Gallon			0.1	0.1
5-Gallon			1.3	1.3
Other	0.3	2.0	1.4	3.6
Round Pint			2.4	2.4
Round Half-pint			2.1	2.1
Round Other			1.2	1.2
Total of all sizes	0.3	68.2	31.6	100.0
	<u>Buttermilk</u>			
Gallon			8.3	8.3
Half-gallon		20.7	41.3	62.0
Quart		17.0	8.5	25.5
Pint		0.9	<u>3</u> /	0.9
Half-pint		1.7	<u>3</u> /	1.7
6-Gallon			<u>3</u> /	<u>3</u> /
5-Gallon			0.7	0.7
Other		<u>5</u> /	0.8	0.8
Round Pint			0.3	0.3
Round Half-pint			<u>4</u> /	<u>4</u> /
Round Other			<u>3</u> /	<u>3</u> /
Total of all sizes		40.2	59.8	100.0

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Table 3--Percentage of Individual and Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, November 2003 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Total fluid milk products</u>			
Gallon			65.0	65.0
Half-gallon	0.1	4.6	13.6	18.3
Quart	<u>3</u> /	2.3	1.4	3.7
Pint		0.2	0.8	1.0
Half-pint	<u>3</u> /	8.4	0.4	8.8
6-Gallon			0.1	0.1
5-Gallon			0.9	0.9
Other	0.1	0.4	0.3	0.8
Round Pint			1.1	1.1
Round Half-pint			0.2	0.2
Round Other			0.2	0.2
Total of all sizes	0.2	15.9	83.9	100.0

1/ The figures in the table are based on the total sales volume for the product in all orders combined. See Appendix Table 1 for applicable sales volume. Totals may not add due to rounding.

2/ Five-gallon and six-gallon containers listed under plastic are mostly bag-in-box units.

3/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Other."

4/ Less than 0.05 percent.

5/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Total of all Sizes."

Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 ^{1/}

Size of container ^{2/}	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Appalachian</u>			
Gallon			71.0	71.0
Half-gallon		0.4	14.7	15.0
Quart		0.6	1.3	1.9
Pint		0.1	1.8	1.9
Half-pint		9.8	0.4	10.2
6-Gallon				
5-Gallon				
Other		^{3/}	^{3/}	0.1
Total of all sizes		10.9	89.1	100.0
	<u>Arizona-Las Vegas</u>			
Gallon			73.8	73.8
Half-gallon		7.9	^{4/}	7.9
Quart		1.2	2.6	3.8
Pint			^{4/}	^{4/}
Half-pint		^{4/}		^{4/}
6-Gallon				
5-Gallon			^{4/}	^{4/}
Other		7.9	6.6	14.5
Total of all sizes		16.9	83.1	100.0
	<u>Central</u>			
Gallon			70.6	70.6
Half-gallon		2.4	12.0	14.4
Quart	^{4/}	2.1	0.1	2.2
Pint		0.2	1.3	1.5
Half-pint		9.5	0.1	9.6
6-Gallon				
5-Gallon			1.3	1.3
Other	0.1	0.1	0.1	0.4
Total of all sizes	0.1	14.3	85.6	100.0

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Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 1--continued

Size of container <u>2</u> /	Type of container			Total of all types
	Glass	Paper	Plastic	
Percent				
<u>Florida</u>				
Gallon			63.5	63.5
Half-gallon		0.6	19.1	19.7
Quart		0.3	2.8	3.0
Pint		0.1	2.4	2.5
Half-pint		7.8	1.7	9.5
6-Gallon				
5-Gallon			1.2	1.2
Other		0.5	0.1	0.6
Total of all sizes		9.2	90.8	100.0
<u>Mideast</u>				
Gallon			70.0	70.0
Half-gallon		1.6	14.0	15.6
Quart		1.3	1.3	2.6
Pint		0.1	1.6	1.7
Half-pint		8.5	0.3	8.8
6-Gallon				
5-Gallon			1.0	1.0
Other		0.3	0.1	0.4
Total of all sizes		11.8	88.2	100.0
<u>Northeast</u>				
Gallon			53.4	53.4
Half-gallon	0.1	11.1	15.7	27.0
Quart	<u>4</u> /	5.1	1.8	6.9
Pint		0.3	2.3	2.6
Half-pint	<u>4</u> /	6.9	0.4	7.3
6-Gallon			0.4	0.4
5-Gallon			0.7	0.7
Other	0.1	0.6	1.1	1.8
Total of all sizes	0.2	24.0	75.8	100.0

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Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Pacific Northwest</u>			
Gallon			72.4	72.4
Half-gallon		9.9	5.9	15.8
Quart		3.1	0.3	3.3
Pint		0.7	1.0	1.7
Half-pint		4.8	0.3	5.1
6-Gallon			<u>4</u> /	<u>4</u> /
5-Gallon			0.7	0.7
Other		0.1	0.9	1.0
Total of all sizes		18.5	81.5	100.0
	<u>Southeast</u>			
Gallon		<u>4</u> /	64.6	64.6
Half-gallon		1.3	15.0	16.3
Quart		1.3	1.5	2.8
Pint		0.4	2.6	3.0
Half-pint		9.3	2.4	11.7
6-Gallon				
5-Gallon			0.8	0.8
Other		0.8	0.1	0.9
Total of all sizes		13.1	86.9	100.0
	<u>Southwest</u>			
Gallon			67.4	67.4
Half-gallon		1.4	14.1	15.5
Quart	<u>4</u> /	0.8	1.2	2.0
Pint		<u>3</u> /	2.1	2.1
Half-pint		11.3	<u>4</u> /	11.3
6-Gallon				
5-Gallon			0.6	0.6
Other	0.3	<u>3</u> /	0.7	1.0
Total of all sizes	0.3	13.6	86.1	100.0

CONTINUED

Table 4--Percentage of Total Fluid Milk Products Sold by Size and Type of Container, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 1--continued

Size of container <u>2</u> /	Type of container			
	Glass	Paper	Plastic	Total of all types
	Percent			
	<u>Upper Midwest</u>			
Gallon			67.5	67.5
Half-gallon	1.1	4.8	10.7	16.6
Quart		1.3	1.1	2.5
Pint		0.1	1.2	1.4
Half-pint		9.0	0.1	9.1
6-Gallon				
5-Gallon			1.7	1.7
Other		0.5	0.7	1.2
Total of all sizes	1.1	15.8	83.1	100.0
	<u>Western</u>			
Gallon			67.4	67.4
Half-gallon		3.9	8.4	12.3
Quart		6.5	1.1	7.6
Pint		0.7	2.9	3.5
Half-pint		6.1	0.5	6.6
6-Gallon				
5-Gallon			1.1	1.1
Other		1.3	<u>3</u> /	1.4
Total of all sizes		18.5	81.5	100.0

1/ The figures in the table are based on the total sales volume for the milk order group. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding. 2/ 5-gallon and 6-gallon containers listed under plastic are mostly bag-in-box units. 3/ Less than 0.05 percent. 4/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Other." 5/ Data are restricted and are included in "Total of all sizes."

Table 5--Percentage of Total Fluid Milk Products Sold in Single-Serve Round Plastic Containers, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 1/

Federal milk Order	Size of single-serve round plastic container			
	Half-pint	Pint	Other	Total
	Percent			
Appalachian	0.4	1.8	<u>2/</u>	2.2
Arizona-Las Vegas	0	<u>3/</u>	<u>3/</u>	1.5
Central	0.1	1.3	0.1	1.5
Florida	0.3	0.1	0	0.4
Mideast	0.3	1.6	0	1.9
Northeast	<u>2/</u>	0.9	0.3	1.2
Pacific Northwest	0	0.8	0.1	0.9
Southeast	<u>4/</u>	1.1	0	1.1
Southwest	<u>2/</u>	2.5	<u>2/</u>	2.5
Upper Midwest	0.1	0.7	0.3	1.1
Western	0.5	2.9	0	3.4
All orders combined	0.2	1.1	0.2	1.5

1/ The figures in the table are based on the total sales volume for the milk order. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding. It should be pointed out that this is only the third collection of data for this type of container. As such, for some orders, the data in this survey may not be comparable to the data from the 1999 and 2001 surveys due to data collection issues.

2/ Less than 0.05 percent.

3/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Total".

4/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Pint".

Table 6--Percentage of Total Fluid Milk Products Sold by Method of Distribution and Type of Wholesale Outlet, by Handlers Regulated Under Federal Milk Orders, November of Selected Years, 1963 to 2003

Year	Method of distribution ^{2/}						
	Home-delivery	Total wholesale	Type of wholesale outlet ^{3/}				All other
			Food chain stores		Institutional		
			Supermarket	Dairy and convenience	Military	Schools	
Percent							
1963	29.7	70.3	---	---	---	---	---
1964	28.5	71.5	---	---	---	---	---
1965	28.3	71.7	---	---	---	---	---
1966	24.9	75.1	---	---	---	---	---
1969	19.0	81.0	---	---	---	---	---
1973	10.3	89.7	---	---	---	---	---
1977	5.3	94.7	42.9	10.0	1.7 ^{4/}	7.7 ^{4/}	32.8
1981	2.3	97.7	49.7	9.8	1.4	6.8	29.9
1985	1.5	98.5	52.6	9.4	1.2	6.8	28.5
1989	1.0	99.0	53.8	10.4	1.0	6.7	27.1
1993	1.0	99.0	57.3	10.7	1.1	6.6	23.4
1997	0.5	99.5	57.6	10.2	0.9	6.3	24.4
1999	0.5	99.5	57.0	9.5	0.8	6.8	25.4
2001	0.4	99.6	53.5	10.0	0.9	7.0	28.3
2003	0.4	99.6	49.6	10.5	0.9	6.4	32.3

^{1/} The figures in the table are based on the total sales volume in all orders combined. See Appendix Table 1 for the applicable sales volume and fluid milk products included.

^{2/} See the "Definitions" section in the Appendix for the description of the various methods of distribution.

^{3/} This breakdown was not available prior to 1977. Percentages may not add to total wholesale due to rounding.

^{4/} Does not include data for the New York-New Jersey marketing area for which these data were not available.

Table 7--Percentage of Total Fluid Milk Products Sold by Method of Distribution and Type of Wholesale Outlet, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 ^{1/}

Federal milk order	Method of distribution ^{2/}								
	Home-delivery	Total wholesale	Type of wholesale outlet						All other
			Food chain stores			Institutional			
			Total	Supermarkets	Dairy and convenience	Total	Military	Schools	
Percent									
Appalachian	0	100.0	60.6	51.1	9.4	10.3	1.5	8.7	29.2
Arizona-Las Vegas/Western*	^{3/}	100.0	63.2	54.7	8.5	6.4	1.1	5.3	30.4
Central	^{3/}	100.0	54.1	49.6	4.5	6.9	0.7	6.2	39.0
Florida	0	100.0	71.7	61.2	10.5	3.6	^{4/}	3.6	24.7
Mideast	^{3/}	100.0	58.7	48.6	10.1	5.5	0.1	5.4	35.8
Northeast	0.2	99.8	65.1	46.8	18.4	7.5	1.5	6.0	27.2
Pacific Northwest	^{3/}	100.0	55.7	47.9	7.8	3.8	0.9	2.9	40.5
Southeast	^{3/}	100.0	54.3	48.1	6.2	10.2	1.5	8.8	35.4
Southwest	^{3/}	100.0	61.8	56.8	5.0	10.1	0.7	9.4	28.2
Upper Midwest	1.3	98.7	53.9	42.9	11.0	5.4	^{5/}	5.4	39.4
All orders combined	0.4	99.6	60.1	49.6	10.5	7.3	0.9	6.4	32.3

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

^{1/} The figures in the table are based on the total sales volume for the milk order group. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

^{2/} See the "Definitions" section in the Appendix for the description of the various methods of distribution.

^{3/} Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "All other wholesale."

^{4/} Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Schools."

^{5/} Less than 0.05 percent.

Table 8--Percentage of Total Fluid Milk Products Sold by Type of Food Chain Store, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 1/

Federal milk order	Type of food chain store <u>2/</u>					
	Total food chain stores	Supermarket		Dairy/convenience		Total vertically integrated
		Vertically integrated	Other	Vertically integrated	Other	
Percent						
Appalachian	60.6	19.1	32.0	<u>3/</u>	9.4	19.1
Arizona-Las Vegas/Western*	63.2	30.7	23.9	0	8.5	30.7
Central	54.1	11.3	38.3	<u>3/</u>	4.5	11.3
Florida	71.7	52.1	9.1	4.0	6.5	56.2
Mideast	58.7	14.2	34.5	0.9	9.3	15.0
Northeast	65.1	23.5	23.3	9.9	8.5	33.3
Pacific Northwest	55.7	22.1	25.8	0.6	7.2	22.7
Southeast	54.3	35.3	12.8	4.8	1.4	40.1
Southwest	61.8	30.6	26.2	0.1	4.9	30.7
Upper Midwest	53.9	0	42.9	<u>3/</u>	11.0	<u>3/</u>
All orders combined	60.1	22.0	27.6	3.6	7.0	25.5

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

1/ The figures in the table are based on the total sales volume for the milk order group. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

2/ See the "Definitions" section in the Appendix for the description of the types of food chain stores.

3/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in applicable "Other". "All orders combined" includes restricted data.

Table 9--Percentage of Total Fluid Milk Products Sold by Type of All Other Wholesale Outlets, by Handlers Regulated Under Federal Milk Orders, by Order, November 2003 1/

Federal milk order	Type of all other wholesale outlets <u>2/</u>			
	Total all other	Superstores/ hypermarkets	Warehouse stores/wholesale clubs	Other
	Percent			
Appalachian	29.2	14.8	1.2	13.2
Arizona-Las Vegas/Western*	30.4	2.7	<u>4/</u>	27.7
Central <u>3/</u>	39.0	3.2	12.3	23.5
Florida	24.7	7.5	<u>4/</u>	17.1
Mideast <u>3/</u>	35.8	9.3	2.0	24.5
Northeast	27.2	6.7	1.3	19.2
Pacific Northwest <u>3/</u>	40.5	9.6	2.4	28.5
Southeast <u>3/</u>	35.4	13.1	4.7	17.6
Southwest <u>3/</u>	28.2	2.0	8.4	17.8
Upper Midwest	39.4	4.4	4.3	30.7
All orders combined	32.3	7.5	4.0	20.8

* The data for Arizona-Las Vegas and Western have been combined in order to mask restricted data.

1/ The figures in the table are based on the total sales volume for the milk order group. See Appendix Table 1 for applicable sales volume and fluid milk products included. Totals may not add due to rounding.

2/ See the "Definitions" section in the Appendix of the types of all other wholesale outlets.

3/ "Total all other" and "Other" includes data for home-delivery which were restricted.

4/ Data are restricted; pertains to the operations of fewer than three handlers. Data are included in "Other." "All orders combined" includes restricted data.

APPENDIX

Definitions

Type of Container: Containers are categorized by glass, paper, and plastic. Containers larger than one gallon shown in the glass category are metal cans. The paper category includes wax-coated and plastic-coated containers, and foil-lined UHT containers. Plastic includes rigid blow mold or thermoformed containers, single-serve round (milk bottle shaped) containers, plastic-lined boxes (polyethylene bag in corrugated paper box or in rigid plastic case), and plastic bags sold separately. Containers larger than one gallon in the plastic category, for the most part, are bag-in-box containers.

Size of Container: Container sizes surveyed are; gallon, half-gallon, quart, pint, half-pint, 6-gallon, 5-gallon, round pint, round half-pint, round other, and other. Containers banded together, or containers put into larger bags, sacs, etc., are reported separately. Examples: 1/2 –gallon twin packs are reported as two 1/2 gallons; four 1-quart bags in a larger bag are reported as four quart units, not as a gallon; six-packs of half pints are reported as six half pints, etc.

Method of Distribution: Sales are divided into home-delivery and wholesale. Home-delivery includes quantities delivered to homes or sold to others for delivery to homes. Wholesale includes quantities distributed through all other methods. Wholesale is broken down into food chain stores, institutional outlets, and all other.

Food chain stores are defined as 11 or more stores, primarily engaged in food retailing, and either being under common management, being franchised by a common company, or belonging to a common purchasing association. Food chain stores are categorized into supermarket or dairy/convenience stores. Also identified are vertically integrated chain stores. Vertically integrated includes those chain stores which have integrated backwards into fluid milk processing, and fluid milk processing plants which have integrated forward into chain store ownership. Also included are franchise organizations in which the franchiser also owns a dairy plant that services the franchisee's store and associations of independent food store owners which jointly own a dairy plant that services their stores.

Institutional outlets are military installations and schools which includes public schools (elementary and high school), colleges, and universities. All other wholesale is broken down into superstores/hypermarkets, warehouse stores/wholesale clubs, and other. Superstores/hypermarkets are general merchandise stores that include a full-line supermarket. Other includes nonchain food stores, nonfood stores (drug stores, gasoline stations, etc.), restaurants, hotels, hospitals, nursing homes, vending machines, and any other type of wholesale outlet.

**Appendix Table 1--Volume of Fluid Milk Products Sold by Handlers Regulated Under Federal Milk Orders
in November of Selected Years**

Fluid milk product	Sales in November 2003 <u>1/</u>	Federal milk order	Sales in November 2003 <u>2/</u>	Year	Sales in November <u>3/</u>
	1,000 pounds		1,000 pounds		1,000 Pounds
Whole milk	1,178,666	Appalachian	350,265	1963	1,662,174
Flavored whole milk	77,151	Arizona-Las Vegas	79,543	1964	1,849,414
Eggnog	60,946	Central	356,887	1965	2,241,845
Reduced fat (2%) milk	1,194,317	Florida	208,324	1966	2,201,685
Low fat (1%) milk	422,577	Mideast	539,249	1969	2,707,399
Fat-free (skim) milk	548,491	Northeast	884,389	1973	3,392,829
Flavored fat-reduced milk	237,408	Pacific Northwest	174,519	1977	3,473,912
Buttermilk	41,241	Southeast	380,752	1981	3,323,819
Total fluid milk products	3,760,797	Southwest	332,026	1985	3,624,757
		Upper Midwest	366,749	1989	3,617,710
		Western	88,094	1993	3,791,658
		All orders combined	3,760,797	1997	3,651,023
				1999	3,724,179
				2001	3,917,452
			2003	3,760,797	

1/ Total sales for all orders combined.

2/ Sales of total fluid milk products for the order.

3/ Sales of total fluid milk products for all orders included in the applicable survey.

Appendix Table 2--Factors for Converting Volumes Sold into Number of Container Units Sold 1/

Fluid milk product	Conversion factors - pounds per:						
	Gallon	Half-gallon	Quart	Pint	Half-pint	6-Gallon	5-Gallon
Whole milk	8.60	4.300	2.1500	1.0750	.5375	51.60	43.00
Flavored whole milk	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00
Eggnog	9.00	4.500	2.2500	1.1250	.5625	54.00	45.00
Reduced fat (2%) milk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10
Low fat (1%) milk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10
Fat-free (skim) milk	8.63	4.315	2.1575	1.0788	.5394	51.78	43.15
Flavored fat-reduced milk	8.00	4.000	2.0000	1.0000	.5000	48.00	40.00
Buttermilk	8.62	4.310	2.1550	1.0775	.5388	51.72	43.10

1/ Conversion process—compute volume sold in the particular size container by multiplying the percentage in the table by the applicable volume in Appendix Table 1; then divide volume by applicable factor in this table to determine the number of container units.